

PROCESSING METHODS AND FORMULATIONS TO ENHANCE STABILITY OF LEAN-NO_x-TRAP CATALYSTS BASED ON ALKALI- AND ALKALINE-EARTH-METAL COMPOUNDS

Abstract

The present invention provides a coarsening resistant automotive exhaust catalyst composition. The composition of the invention comprises a metal or metal-containing compound and a component having alkali metal or an alkaline-earth metal ions bonded to a conjugate base oxide of an inorganic acid. The inorganic acid for which the base oxide is conjugate has a K_a such that the automotive exhaust catalyst composition resists phase transitions that reduce surface area. The present invention also provides a NO_x trap which incorporates the exhaust catalyst composition of the invention. Finally, a method of inhibiting coarsening in automotive exhaust catalyst is also provided.